MANAGEMENT ACCOUNTING AND FINANCE (MFAC6211) PRACTICE ASSESSMENT QUESTION BOOK 2023 (First Edition: 2022)

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Using this Book

This book consists of practice assessment questions for the Module MFAC6211. These questions are designed to help you to engage with the subject matter as well as to help you prepare for your assessments.

ManuFact (Pty) Ltd (LU 1 & 2)

Extracts from the statement of profit or loss for the year ended 28 February 2021 of ManuFact (Pty) Ltd is presented below:

	Notes	R'000
Revenue		700 000
Costs:		
- Factory workers	1	71 000
- Factory supervisors	2	45 000
- Sales commission	3	17 500
- Depreciation	4	12 800
- Water and Electricity (factory)	5	23 200

Notes:

1. Factory workers are paid weekly based on the hours they work. The company makes use of a clock card system to keep accurate record of hours worked per employee.
2. There are three factory supervisors. All three are permanent employees. All permanent employees get paid a fixed monthly salary. Permanent employees are also asked to use the clock cards.
3. Sales commission is paid to sales agents monthly. The commission for the year was set at a fixed rate of 2.5% of revenue.
4. The depreciation costs can be split further as follows:

Factory equipment	R6 400 000
Warehouse fixtures	R5 120 000
Office fixtures	R1 280 000

Depreciation is calculated on the straight-line basis.

5. A portion of the water and electricity costs remain constant each month, the balance however changes depending on the production volumes. The following observations have been made in a six-month period:

	Total cost (R'000)	Total production units
January	R25 500	9 000
February	R21 750	7 500
March	R27 750	9 900
April	R28 250	10 100
May	R21 625	7 450
June	R23 750	8 300

Required:	
Explain the difference between the following: A manufacturing cost and a non- manufacturing cost A fixed cost and a variable cost	(4)
Calculate the total manufacturing and non-manufacturing costs of ManuFact (Pty) Ltd using the information presented above. Further split the costs between fixed and variable costs. Use a table to present your answer.	(11)

Maizefarm (LU2)

(Marks: 30)

Part A

Sandy and Brian are siblings who have recently purchased a maize farm in the KwaZulu Natal Midlands. They have been working long hours on the ground for the last year. Neither of them is very good with numbers, they have therefore asked you to help them with their accounting records. Below is an email they sent you:

To: MFAC6211 Student.co.za
From: SandyandBrian@maizefarm.co.za
Subject: Please help!

Hi,
I hope you are well. As discussed earlier on the phone call, please can you assist.
Last week we attended an accounting workshop for new farmers, but we couldn't make sense of what they were saying. The speaker kept going on about how we should always know which are our variable costs and which are our fixed costs. Costs, are costs surely? Why should it matter whether they are fixed or variable? Whatever that is anyway.

We're attaching the excel document for December 2021 that we use to record our costs; can you help us figure out how we can split them into fixed and variable?

Thanks
Sandy and Brian

Excel attachment:

Cost	R	Comment
Cleaning	?	We have an annual contract with Themba Cleaning (Pty) Ltd which costs us R120 000. They usually send between three or four cleaners to us three times a week for 8 hours each day. Each month we receive a bill for the same amount.
Depreciation on tractors	?	The farm has purchased four tractors since we started operations. Each tractor cost R200 000 and we decided to depreciate these over 6 years.
Fuel	20,000	The fuel cost depends on the use of the tractors and other equipment. In months of higher output, this cost increases.
Seed, and insecticides	23,500	These costs seem to fluctuate month on month depending on output.
Land rental	?	We signed an agreement with the landowners last year. The rental payable under that agreement was R65 000 per month. We have just received notification that December 2021's rental will be increased by 6%.
Salaries	44,000	This relates to the salary we draw for ourselves each month. All other employees are hired informally and paid per hour.
Wages	?	Informal labour. The labour required per month depends on the level of output. For every 1 000 units of output, 20 labour hours are required. Current labour rate is R20 per hour.
Water and Electricity	33,400	A portion of this cost remains the same each month. The remaining value fluctuates depending on farm output. November's cost was R36 100. December = 52 000 units output, November=58 000 units' output.

Part B

Sandy and Brian have been impressed with your knowledge on farm costing and have shared your details with their friend Shuaib. Shuaib has recently calculated his over/under recovery of production overheads for the month of February 2022, but is not certain that his calculations are correct. He has asked you to go through his calculations and provide him with feedback.

Item	**Rand**	**Units**
Actual Overheads	125,000	22,000
Budgeted Overheads	100,000	20,000
Applied Overheads	110,000	22,000
Journal entry recorded		
Dr Manufacturing overheads	10,000	
Cr Cost of Sales		10,000
Journal entry to record over recovery of overheads (110 000 -100 000)		

REQUIRED:

	Explain the difference between fixed and variable costs and why it may be beneficial to differentiate between the two.	(3)
	Using the information supplied by Sandy and Brian, create a schedule of costs separated into fixed costs and variable costs for the month of December 2021. *A motivation is not required.*	(17)
	Review Shuaib's calculations and provide him with feedback. Include correcting calculations and journal entries (if applicable). You can a*ssume that the applied overheads have been correctly calculated.*	(10)

Cinder Ella (Pty) Ltd (LU3)

(Marks: 15)

Cinder Ella (Pty) Ltd, (Cinder Ella) is a manufacturing company based in Cape Town. The company has been trading for the last 25 years and specialises in manufacturing tech gadgets. Cinder Ella uses an absorption costing system and currently allocates fixed production overheads to its products by using production units as an allocation base.

Mr Nathaniel Wolmarans is the management accountant at Cinder Ella and believes that employing an Activity Based Costing System will better suit the entity and allow them to be more competitive. He has prepared the following information regarding the activities at Cinder Ella.

Activity	**Cost driver**	**Fixed manufacturing overheads (R'000)**
Scheduling	Number of orders	81
Handling	Number of parts	1 232
Assembly of gadget	Assembly time	2 236
Testing gadgets	Number of tests	1 000
Packing finished units	Number of units	651

Further information has been provided below:

Products	**Techno**	**Techy**	**TechX**
Budgeted production units	5 000	6 000	3 000
Average units per order	5	3	2
Total number of parts	50 000	102 000	36 000
Assembly time per unit	15 minutes	20 minutes	25 minutes
Number of tests	10 000	18 000	15 000

Required:

Q.5.1	Explain which entities may be better suited to an Activity Based Costing system of allocating fixed production overheads and why.	(4)
Q.5.2	Calculate the total fixed manufacturing overhead cost of Techno only, using the activity-based costing method of allocating fixed production overheads. [Round all amounts to the nearest whole number]	(11)

Steelworks (Pty) Ltd (LU3)

(Marks: 20)

Steelworks (Pty) Ltd is a manufacturing company based in Cape Town. The company began as a small family business working from the family's backyard in the 1980's and has grown substantially with three factory premises in Cape Town, Johannesburg and Durban. Each factory runs independently servicing clients in their respective locations. Historically, Steelworks (Pty) Ltd has implemented a traditional costing method to allocate their production overheads. Steelworks (Pty) Ltd has used a pre-determined rate based on machine hours as their allocation basis.
The Cape Town division has decided to implement an Activity-based costing system (ABC) in 2021 at their division. The managing director Wikus Smith is hopeful that this change may result in an improvement in their financial results.

The Cape Town division specialises in three product lines namely, ST1, ST2 and ST3. The following information is relevant to the 2021 financial year.

	Product ST1	**Product ST2**	**Product ST3**
Floor space	192 m^2	48 m^2	138 m^2
No. of set ups	40	60	100
Machine hours	20 000	45 000	60 000
Design hours	30	40	15
Units produced	15 000	16 000	69 500

Annual production overhead costs	
Cleaning per month (Note 1)	R12 600
Production set up	R164 860
Design costs	R50 065
Machining costs	R2 150 672

Notes:

1. The Cape Town division has a contract with Impressive Clean (Pty) Ltd. The monthly charge of R12 600 includes the cost for cleaning both the factory and factory machines, and the office space. The office space makes up 10% of the cost. Cleaning costs are allocated to the products based on the floor space occupied by each product lines.

REQUIRED:

Calculate the production overhead cost per unit of all three products using the traditional method.
[Round amounts to two decimal places]

Calculate the production overhead cost per unit of all three products using the Activity-based costing method.

[Round amounts to two decimal places]

Modell (Pty) Ltd (LU 3)

Modell Products (Pty) Ltd ("Modell Products") is a toy manufacturer that currently manufactures only two toy trains namely Model X8 and Model X9. Historically, Modell Products has implemented the traditional costing method using machine hours and has recently been investigating the activity-based costing (ABC) method. The following information has been extracted from the company records:

	Model X8	**Model X9**
Number of units manufactured and sold	20 050	18 070
Direct material cost per unit	R42	R65
Direct labour cost per unit	R18	R17
Machine hours per unit	16	15

During the investigation into ABC costing, a specialist consultant was hired and she has identified the following activities that may be used in implementing an ABC system:

Activities	**Cost**
Purchasing costs	R85 000
Machine department costs	R920 000
Set up related costs	R828 000
Packaging and shipping related costs	R88 400
Quality control costs	R112 000
	R 2 033 400

Modell Products purchases raw materials from only one supplier. Orders are placed twice a year for Model X8 and three times a year for Model X9.

The production process is set up for every 1 000 units of Model X8 and every 500 units of Model X9.

Inspections are performed on 25% of all Model X8 units and 10% of all Model X9 units.

Required:	
Explain what the traditional costing and activity-based costing methods are used for and how they differ.	(3)
Calculate the total cost per unit of each product using the traditional costing method. [Round all answers to two decimal places.]	(7)
Calculate the manufacturing overhead cost per unit of each product using the activity-based costing method. [Round all answers to two decimal places.]	(15)

All in One (Pty) Ltd (LU 3)

The Chief Financial Officer (CFO), Mr Dube, of All-in-One (Pty) Ltd completed his degree in chartered accountancy 23 years ago. The Chief Executive Officer (CEO) of All-in-One (Pty) Ltd approached Mr Dube wanting to know why they do not have an Activity-Based Costing (ABC) system in place to allocate overheads to products. Mr Dube remembers studying ABC at University; however, he has forgotten how it works. Mr Dube sent you an email requesting an explanation of the differences between the traditional costing method versus the ABC method before he sets up a meeting with the CEO to discuss the matter with him.

Required:	
Respond to Mr Dube's email with an explanation of the differences between the traditional costing method and the ABC method of overhead allocation. Use examples, where applicable, to illustrate the differences.	(10)

Cool Company (Pty) Ltd (LU 3)

Cool Company (Pty) Ltd currently allocates overheads based on machine hours. The cost accountant is considering changing to the Activity-Based Costing (ABC) Method. Cool Company manufactures three products: Cooler 105, Cooler 205 and Cooler 305.

A study into the production processes have revealed that the overhead costs can be divided into the following activities:

Set ups	16%
Machine hours	48%
Material handling	27%
Inspection	9%
	100%

The activities for the current period:

	Cooler 105	**Cooler 205**	**Cooler 305**	**Total**
Set ups	36	78	130	**244**
Machine hours	1 200	2 800	2 900	**6 900**
Material handling	75	95	80	**250**
Inspection	12	15	28	**55**

Additional information:
The total budgeted overhead costs for the current period is R750 000.

Required:	
Calculate the allocated fixed manufacturing overheads of Cooler 305 using the ABC Method.	(10)

Free it Up University (LU 3)

You are a Management Accounting student at FreeItUp University and are currently busy studying the difference between the traditional way of costing products and the new and improved ABC (activity based costing) method. Your father finds out that you are studying ABC and asks for your help with his ABC/traditional costing analysis that he needs to perform for the company he works for in order for them to make a decision as to whether or not to use ABC or continue with the traditional method of costing their products. The following is the information he has currently for the memorandum he needs to prepare:

The company manufactures two products which are used in the manufacture of cell phones, Product A345 and Product B987. Both products are produced using the same machine. In total the machine can run for 8 hours per day, five days per week. There are 52 weeks in a year. The company works on shift work basis and therefore there is someone manning the machine every day. The machine must be supervised and therefore cannot run in the evenings or over weekends when there is no one at work. In total they manufacture 1 660 units of A345 and 5 000 units of B987 per annum. In general it seems to take twice as long to produce unit A345 as it does to produce unit B987. The traditional method of allocating the overheads was based on machine hours.

The total manufacturing overheads amount to R4 500 000 for the period ended 31 March 2018. After careful analysis, done by an ABC specialist, the following are the activities that drive the cost of the overheads and the percentages of the overall costs that they represent as well as what the ABC expert says drives the cost:

Fixed manufacturing overheads	**Cost driver**
Material purchasing (20%)	No. of orders (the company orders once per month, one order per product)
Machine Set-up (25%)	No. of set-ups (the machine is set up every 100 units for B987 and every 20 units for A345)
Production (55%)	Machine hours

Required:	
Calculate the amount of overheads to be allocated per product based on the traditional method of costing. Please round all answers off to two decimal places	(5)
Calculate the amount of overheads to be allocated per product based on the ABC method of costing. [Round all answers to two decimal places.]	(10)

Triple Prod (Pty) Ltd (LU3)

TripleProd (Pty) Ltd manufactures three main products, using mostly the same production methods and equipment for each. The company uses the traditional costing system at present to cost the products. The following budgeted information is applicable for the three products for the financial year ended 31 December 2021.

Product	Labour time per unit	Machine time per unit	Material cost per unit (R)	Volume (units)
TPX1	60 minutes	180 minutes	50	1 500
TPX2	60 minutes	60 minutes	24	2 250
TPX3	30 minutes	90 minutes	40	12 300

The direct labour cost is R15 per hour. Manufacturing overhead costs are allocated to the products based on machine hours. The allocation presently used is R30 per machine hour. The company's cost accountant, Paul Botha has recently attended a short course on costing methods and is considering implementing an activity-based costing system (ABC) at TripleProd (Pty) Ltd. At a recent management meeting, on the topic of moving from the traditional costing system to the activity based costing system, Paul stated: "We've got to make better pricing decisions and we can only do that with a more accurate method of allocating costs, like ABC". After some investigation, he has collected the following information:

- Manufacturing overheads are driven by five activities, namely: Set up costs (25%), machinery costs (20%), material handling costs (15%), inspection costs (30%) and maintenance costs (10%).
- The following budgeted activity volumes are associated with the product line for the financial year ended 31 December 2021.:

Product	Number of set ups	Number of material movements	Number of inspections	Maintenance hours
TPX1	75	12	150	5
TPX2	115	21	180	6
TPX3	480	87	670	18
Total	670	120	1 000	29

Required:	
Calculate the total cost per unit for TPX3 only, using the traditional costing system and the activity-based costing (ABC) system. [Round all answers to the nearest whole number.]	(15)
Comment on whether or not you agree with Paul's statement at the management meeting. Make reference to your answer above.	(5)

Dream Shoes (Pty) Ltd (LU 4)

DreamShoes (Pty) Ltd is a company trading with different kinds of shoes. They import the shoes from China and then sell them to boutique shops in the Gauteng area. They make use of the weighted average method of inventory valuation.

You have been provided with the following table for movements of product IX35 for February 2018:

Date	Receipts			Issues			Balance		
	Units	**Cost per Unit**	**Total Cost**	**Units**	**Cost per Unit**	**Total Cost**	**Units**	**Cost per Unit**	**Total Cost**
01/02							120	R56,00	R 6 720
04/02	900	R62,00	R55 800				120 900 **1 020**	R56,00 R62,00 (i)	R6 720 R55 800 (ii)
11/02				420	(iii)	(iv)	**600**	(v)	(vi)
16/02	510	R64,00	R32 640				600 510 **1 110**	(v) R64,00 (vii)	(vi) R32 640 (viii)
21/02	(150)	(ix)	(x)				1 110 (150) **960**	(vii) (ix) (xi)	(viii) (x) (xii)
25/02				820	(xiii)	(xiv)	**140**	(xv)	(xvi)

Units returned to the supplier on the 21st of February relates to goods received on 4 February.

The net realisable value of this stock item is R 7 690 as at 28 February 2018. Note that a unit refers to a pair of shoes.

Required:	
Complete the above table, where indicated in roman numbering for February 2018 for stock item IX35.	(8)
Calculate the cost of sales for February 2018.	(2)

ABC (Pty) Ltd (LU 5)

ABC Packaging (Pty) Ltd is a packaging company that makes specialised packing bags for their customers. The information below relates to the month of February 2019.

General Ledger Account	Balance as at 01/02/2019
Direct Materials	R 298 665

Costs for February 2019 has been allocated as follows:

Jobs:	Direct Material	Wages	Labour hours
Job A100	R 50 400	R 41 000	2 400
Job A200	R 16 900	R 9 852	1 600
Job A300	R 8 000	R 4 100	800
Totals	**R 75 300**	**R 54 952**	**4 800**

Additional information:

The predetermined manufacturing overhead allocation rate is R35 per labour hour.
The actual manufacturing overhead cost for February 2019 is R170 000.
Job A100 and Job A300 were completed and transferred to finished goods.
Job A100 was invoiced to the customer on 28 February 2019 for R300 000.

Required:	
Prepare the following general ledger accounts. (You are not required to close off or balance any of the accounts.) Direct Materials; Work in Progress; Finished Goods.	(6.5)
Calculate the over/under applied overheads for February 2019.	(3)
Calculate the profit/loss on Job A100.	(4.5)

Design Centre (LU 5)

Design Centre manufactures customised products for their clients. The following information relates to January 2018:

Opening Balance – Direct Materials	R450 000
Opening Balance – Work-in-progress	R120 000
Materials purchased in January	R249 130

The following material requisitions were issued during January 2018:

Job 7230	R150 780
Job 7865	R107 564
Job 8398	R 54 763

Wages paid in January 2018 were:

Job 7230	R34 679
Job 7865	R12 945
Job 8398	R 7 300

Additional information:

- The opening work in progress relates only to Job 7230 that was started in December.
- Jobs 7865 and Job 8398 were started in January. As at 31 January Job 7865 was not yet completed.
- Job 7230 and Job 8398 was invoiced to the clients on 31 January for R450 000 and R145 000 respectively.
- Manufacturing overheads for each month are allocated as 30% of the material cost for that month.
- The actual manufacturing overheads at the end of January was R92 000.

Required:	
Prepare the cost ledger accounts for the following jobs: Job 7230;Job 7865.	(6)
Calculate the profit/ loss on Job 8398.	(5)
Calculate the over/ under recovery of overheads.	(3)

Fine Furnishing (LU5)

Fine Furnishing (Pty) Ltd manufactures specialised furniture for their clients. Furniture is custom made according to customer specifications and is made once and order is placed. The information below was obtained for the month of May 2018.

Current Jobs	Material Requisitions (R)	Wages paid (R)	Labour Hours	Selling Price
Job 1098	300 000	125 000	1 000	R1 050 000
Job 1099	220 500	104 000	750	Job not yet completed
Job 1100	130 880	89 756	400	Job not yet completed
Job 1101	60 750	12 355	120	Mark up of 60% on cost
Totals	**712 130**	**331 111**	**2 270**	

Budgeted Other Manufacturing overheads for the month of May 2018 were:

Electricity	R 60 200
Factory rent expense	R115 000
Maintenance on factory equipment	R 42 150

Additional information:

1. Other manufacturing overheads are allocated based on labour hours. Fine Furnishing had budgeted 2 070 labour hours for the month of May 2018.
2. There was no opening work in progress or finished goods at the beginning of May.
3. Materials opening inventory amounted to R1 230 000. Additional material costing R370 000 was purchased at the beginning of the month.

Required:	
Calculate the profit/loss for the following jobs and clearly indicate whether it is a profit or loss: Job 1098 (3.5) Job 1101 (3)	(6.5)
Prepare the following general ledger accounts, properly balanced, for the end of May 2018: Direct Material (2) Work-in-progress (3.5) Finished Goods (1)	(6.5)
Calculate the over/under recovery if Actual overheads for May 2018 was R230 000.	(2)

Jacaranda (Pty) Ltd (LU 5)

Jacaranda (Pty) Ltd ("Jacaranda") manufactures treehouses from recycled plastic. The custom-made treehouses are manufactured at Jacaranda's factory in Kloof and then installed at the customers premises. Jacaranda uses a job costing system to record their work in process. The following information has been extracted from Jacaranda's records at the end of January 2020:

JOB CARD: J8491	**JOB CARD: J8492**
Customer: M. Harry Start date: 29 December 2019 Due date: 30 January 2020 Selling price: R28 000	Customer: Z. Majola Start date: 15 January 2020 Due date: 2 February 2020 Selling price: R 15 800
Material required: 40 metres Issued to production 29 December: 25 metres Issued to production 13 January: 15 metres	Material required: 25 metres Issued to production 19 January: 10 metres
Labour required: 80 hours Labour charged in December: 30 hours Labour charged in January: 50 hours	Labour required: 39 hours Labour charged to date: 12 hours

- At the beginning of December 2019, there were 30 metres of material on hand. This material was all purchased at a price of R180 per metre. On 30 December 2019, 30 metres of additional material was purchased at a price of R190 per metre. Jacaranda uses the FIFO method to value its materials.
- Jacaranda employs labourers to manufacture the treehouses at R25 per hour.
- Manufacturing overheads are allocated as 75% of the total labour cost of each job.

The under recovery of overheads amounted to R237 for the month of January.

Required:	
Calculate the actual overheads for the month of January 2020.	(4.5)
Prepare the materials control ledger account for the month of December 2019.	(4)
Prepare the cost ledger account for J8491 for the month of January 2020.	(6.5)

CostCo (Pty) Ltd (LU 5)

The following general ledger and sub-ledger accounts have been extracted from the records of CostCo (Pty) Ltd for the month of January 2021.

Dr	Job A	Cr
Opening balance	R15 235	
Direct material CC1	R82 800	
Direct labour	R13 500	
Applied manufacturing overheads	R33 120	

Dr	Job B	Cr
Direct material CC1	R65 480	
Direct labour	R9 850	
Applied manufacturing overheads	R26 192	

Dr	Job C	Cr
Direct material CC1	R22 800	
Direct labour	R6 280	
Applied manufacturing overheads	?	

Dr	Direct Material CC1		Cr
Opening balance	-	5 January: Issue to Job A	R82 800
2 January: Purchase (9 380 units @R10)	R93 800	10 January: Issue to Job B	R65 480
8 January: Purchase (12 000 units @R12)	R144 000	13 January: Issue to Job C	R22 800

Additional information:

- Manufacturing overheads are allocated as a percentage of direct materials cost per job for the month.
- Actual overheads for the month of January amounted to R75 385.
- CostCo (Pty) Ltd applies a mark-up of 35% on the cost of each job.

- The first-in-first-out (FIFO) method of inventory valuation is used to value direct materials

Required:

Explain the nature of a job costing system and give an example of an organisation where its use would be appropriate.	(3)
Calculate the under or over recovery of manufacturing overheads for the month of January 2021 and prepare the journal entry to record this in the general ledger. Clearly indicate whether manufacturing overheads have been over or under absorbed. [Round all answers to the nearest whole number.]	(7)
Prepare an extract of the statement of profit or loss for the month ended 31 January 2021, given that only Job B has been completed and sold to the customer. [Round all answers to the nearest whole number.]	(5)

Calculate the number of units of direct material issued for each job during the month of January 2021. ***Use the table below to present your answer:*** (7)

Date	Receipts			Issues			Balance		
Jan	Qty	Price	Amount	Qty	Price	Amount	Qty	Price	Amount

Comment on whether you would expect the closing balance of the direct materials account to differ if the weighted average method of inventory valuation was used instead. Justify and explain your answer	(3)

Ginny (LU 5 & 6)

Part A

Ginny Matthews, a friend of yours, started a business in the lockdown. Ginny is allergic to some of the chemicals used in the cleaning products that are available at the supermarkets and has been making her own safe cleaning products for two years. During the lockdown, with sufficient available time, she decided to produce and sell cleaning products. She now has a few regular customers that she supplies with her cleaning product "SafeClean". SafeClean is sold in bottles of 750mls. The following information is available for Ginny's business "Ginny's Safe Cleaning" for the month of April 2021.

- Opening work in progress consisted of 75 litres of product that still required 30% of conversion costs.
- Closing work in progress consisted of 85 litres of product that still required 40% of conversion costs.
- 100 litres were added to production during April. 80 litres of product were completed and transferred at the end of April 2021.
- At the end of the process, approximately 3.34% of the product is expected to have evaporated.
- Opening work in progress cost was R1 000 and the current production cost was R2 400. Raw materials consistently make up 70% of the cost.

Part B

Ginny, happy with the success of her first business, has decided to start a second business. She is manufacturing face masks for children. Each face mask is made according to the customers specifications. There are a variety of colours, pictures and additions that can be included for each product. She has set up a WhatsApp business account where the customer can chat to her about their specific requirements. Ginny is considering her options for costing the product and has heard about process costing and job costing systems. She has asked you for your advice on which would be best suited for her business.

Required:	
PART A: Calculate the average cost per litre of Safe Clean in April 2021, assuming that Ginny uses the weighted average method to value inventory.	(15)
PART A: Assuming that Ginny's selling price is calculated using a mark-up of 35% on the average cost per litre, calculate the selling price of one unit.	(2)
PART B: Prepare an email to Ginny explaining the two costing systems. Advise Ginny on which costing system would be best suited for her business.	(8)

Mandisa Chem (LU 7)

Mandisa Chem is a company that manufactures chemicals used by the cleaning staff at BedBest (Pty) Ltd hospitals. Three of the chemical products that Mandisa Chem produce are manufactured in a joint process. These are MC720, MC850 and MC901. Mr Pretorius, Mandisa Chem's cost accountant, currently allocates all the costs incurred in the joint process equally amongst the three chemicals. In the last financial year, 60 000 litres of MC901 were produced, compared to 55 000 litres of MC850 and 5 000 litres of MC720.

Required:	
Write an email to Mr Pretorius, commenting on the current method of allocating joint costs to products. Recommend alternative methods that should be considered.	(10)

Caffeine Pro (LU 6 & 7)

Caffeine Pro (Pty) Ltd is the parent company of three subsidiary companies: Harvest Pro (Pty) Ltd, Roasting Pro (Pty) Ltd and Bean Pro (Pty) Ltd. The company operates in the coffee industry and has a holistic view on business. Each of these companies uses a different costing system as indicated in the respective parts below.

PART A

Harvest Pro (Pty) Ltd consists of multiple farms with coffee plantations and the nature of the business is the harvesting of coffee beans. The company only harvests three grades of coffee beans as graded by the SCAA (Specialty Coffee Association of America), namely Specialty Grade Green Coffee (Grade 1), Premium Coffee Grade (Grade 2) and Exchange Coffee Grade (Grade 3). The company uses a joint- and by-product costing system.

During the process of harvesting coffee beans, approximately 50% of the coffee fruit is discarded in the form of pulp and mucilage. To prevent water pollution, the pulp and mucilage have to be disposed of. It is estimated that it will cost the company R 260 000 in the 2019 financial year to dispose of the pulp and mucilage. There is currently no other use for these products.

The following is an estimate of the cost to be incurred for the 2019 financial year regarding the harvesting of coffee:

Direct material	R 1 020 000
Direct labour	R 840 000
Transportation	R 370 000
Manufacturing overheads	R 680 000

At the split-off point, one tonne of coffee fruit generates 250kg of grade 1 coffee, 150kg of grade 2 coffee and 100kg of grade 3 coffee. At this point grade 1 coffee is sold for R120 per kilogram, grade 2 coffee is sold for R80 per kilogram and grade 3 coffee is sold for R50 per kilogram.

No further processing is done. Assume that the company had no opening or closing inventory.

Required:	
Determine the joint costs for the 2019 financial year to be allocated..	(3)
Allocate the joint costs to the products based on the sales value at split-off point method.	(6)
Discuss the accounting treatment for a by-product with incidental sales if no regular market exist.	(1)

PART B

Roasting Pro (Pty) Ltd roasts coffee beans. All coffee beans in the roasting process are provided by Harvest Pro (Pty) Ltd and only grade 1 coffee beans are used. All transactions between Roasting Pro and Harvest Pro takes place on an arm's length basis and amounts indicated is the total costs incurred in relation to the coffee beans purchased. The company uses a process costing system.

The following information was provided for the month ended 30 April 2018:

1) The company had 30 000kg of coffee beans in opening work in progress (WIP) on 1 April 2018. Opening WIP was 30% complete with a resulting cost of R 258 000 for material and R 162 000 for conversion.
2) 120 000kg of coffee beans were put into production during the month of April 2018.
3) Kilograms completed and transferred to finished goods during the month were 120 000kg. Related costs are R 1 020 000 for material and R 780 000 for conversion.
4) Evaporation occurs when the process is 70% complete, resulting in an estimated loss of 5% of the mixture.
5) Closing WIP of 20 000kg were 60% complete.
6) The company uses the First-in-first-out (FIFO) method of inventory valuation. Material is added in the beginning of the process and conversion takes places evenly throughout the process.

Required:	
Prepare the quantity statement for the month of April 2018.	(14)
Prepare the production cost statement for the month of April 2018.	(5)
Assuming the company now make use of the weighted average method of inventory valuation and the loss occurs at 10%, discuss, in detail, how the quantity statement will change.	(5)

PART C

Bean Pro (Pty) Ltd manufactures coffee roasters according to client specifications and uses a job costing system. They have allocated direct material and direct labour to the three jobs started and completed during April 2018 as follows:

	PrimeXI	**PremiumIV**	**ExelV**
Direct material	21 500	18 600	14 200
Direct labour	7 600	6 800	4 900

The budgeted manufacturing overheads for April were R82 000 and actual manufacturing overheads were R 86 000. Machine hours for April 2018 were budgeted to be 20 500 hours in total. At the end of the month they have correctly calculated that 7 200 hours were worked on PrimeXI, 6 800 hours were worked on PremiumIV and 6 900 hours were worked on ExelV.

Required:	
Prepare the journal entry to account for over/under absorbed manufacturing overheads.	(6)

ABC Manufacturers (LU6)

(Marks: 10)

ABC Manufacturers (Pty) Ltd is a manufacturing entity in Gauteng that produces custom made vehicle parts. The company employs a job costing system. The following reports have been pulled from their accounting software, Procost.

ABC Manufacturers

Stores Issue detail by Job No:IV308, IV310,IV312
Issued by: Materials Warehouse Period: 1/12/2021 - 31/01/2022
Issued to: Job A

Quantity	Date	Description	Rand/unit
10	11/12/2021	Material XA4	R 50
8	07/01/2022	Material YR12	R 24

ABC Manufacturers

Stores Issue detail by Job No:IV311, IV313, IV323
Issued by: Materials Warehouse Period: 1/12/2021 - 31/01/2022
Issued to: Job B

Quantity	Date	Description	Rand/unit
10	03/01/2022	Material XA4	R 50
8	17/01/2022	Material YR15	R 27
2	20/01/2022	Material YR12	R 24

ABC Manufacturers

Labour allocation by Job
Issued to: Job A Period: 1/12/2021 - 31/01/2022

Hours	Date	Employee
6	13/12/2021	A. Pillay
6	10/01/2022	B. Mkhize

ABC Manufacturers		
Labour allocation by Job		
Issued to: Job B		Period: 1/12/2021 - 31/01/2022
Hours	**Date**	**Employee**
7	14/01/2022	A. Pillay
6	16/01/2022	A. Pillay
4	25/01/2022	B. Mkhize

Additional information:

- ABC Manufacturers pay their labourers at a rate of R26 per hour.
- Manufacturing overhead costs are allocated to specific jobs using a pre - determined rate of R150 per direct labour hour.
- Job A was completed at the end of January 2022. Job B will only be completed in March 2022 following receipt of an imported component required.

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REQUIRED:

Using the documents provided and the additional information, prepare the following cost ledger accounts for the month of January 2022 (properly balanced):

- Job A (5.5)
- Job B (4.5)

Super Tea (Pty) Ltd (LU 6)

(Marks: 30)

Super Tea (Pty) Ltd ("Super Tea") produces an iced tea that is sold to restaurants and hotels in Pretoria. The company was started by two sisters, self-proclaimed Tea connoisseurs Melissa and Mandy Naidoo. The pair started their business in December 2021 and the business has grown substantially since then.
Super Tea uses a process costing system to record their costs. The raw material is added at the beginning of the process and labour and overhead costs are incurred evenly throughout the process.
Melissa and Mandy are both marketing graduates and unfamiliar with costing principles. At the onset they hired an accounting graduate, Mark, to assist them. Mark has created the following quantity statement for the month of April 2022. You can assume that the quantity statement is accurate.

Physical units			Equivalent units			
			Material		Conversion	
Input	**Description**	**Output**	**Units**	**%**	**Units**	**%**
10 000	Opening work in progress					
93 000	Put into production					
	Completed and transferred from:	75 000				
	Opening work in progress	9 400	-	-	7 520	80%
	Current production	65 600	65 600	100%	65 600	100%
	Normal loss	4 800	4 800	100%	1 680	35%
	Abnormal loss	200	200	100%	70	35%
	Closing WIP	23 000	23 000	100%	7 360	32%
103 000		**103 000**	**93 600**		**82 230**	

Additional information:

- The opening work in progress on 1 April 2022 consists of Raw Material (R75 369) and Labour and Overheads (R265 221).
- The costs for the month of April are R350 863 (Raw Material) and R485 635 (Labour and Overheads).

Melissa and Mandy are keen to expand their range of iced teas. They are perfecting recipes for rooibos, strawberry, and mint variations of their iced teas. The variations will be produced in the same process. At a specific point in the process, differing additional raw materials are added for each iced tea variation before the teas are bottled and ready for sale.

REQUIRED:

	Prepare the production cost statement for the month ended 30 April 2022. (Round amounts to two decimal places)	(4)
	Prepare the cost allocation statement for the month ended 30 April 2022, reconciled to the production cost statement prepared in Q1.1. (Round amounts to two decimal places)	(22.5)
	Comment on how Super Tea should calculate the costs for each of the iced tea variations.	(3.5)

JoJo Juice (Pty) Ltd (LU 6)

Jojo Juice (Pty) Ltd produce the energy drink GoJuice. The company uses a process costing system. The following information was provided for the month ended 31 May 2020:

Quantity Statement

Physical Units			Equivalent Units			
Input	Description	Outputs	Material		Conversion	
			Units	%	Units	%
20 000	Opening WIP					
110 000	Put into Production					
	Completed and Transferred	108 000	108 000	100%	108 000	100%
	Normal Loss	5 500	5 500	100%	1 650	30%
	Abnormal Loss	4 500	4 500	100%	1 350	30%
	Closing WIP	12 000	12 000	100%	7 200	60%
130 000		**130 000**	**130 000**		**118 200**	

Additional information

- Opening WIP was 40% complete with a resulting cost of R 234 000 for material and R 198 000 for conversion.
- Costs for litres completed and transferred to finished goods during the month are R 982 000 for material and R 793 000 for conversion.
- Evaporation occurs when the process is 30% complete, resulting in an estimated loss of 5% of the liquid.
- Jojo Juice (Pty) Ltd is working on creating a new energy drink GreenJuice. GoJuice and GreenJuice can be made using the same materials and in the same process. Once the juicing process is completed, litres of each juice produced are expected to be similar. GreenJuice will incur further processing costs of R8 per litre in order to complete the product.

Required:	
Explain the differences between normal and abnormal losses. Provide an example of a possible abnormal loss Jojo Juice (Pty) Ltd may experience.	(6)
Explain how the normal loss would have been calculated, assuming that the FIFO method of inventory valuation was used and that the evaporation occurred when the process was 50% complete instead.	(5)
Using the weighted average quantity statement given in the question, prepare the "closing WIP" section of the allocation statement.	(20)
Explain how Jojo Juice may account for the costs incurred in producing both GoJuice and GreenJuice.	(9)

Happy (Pty) Ltd (LU 6 & 7)

Part A

Happy (Pty) Ltd manufactures Happy Face cream on a continuous process basis. The product uses various raw materials that are issued to the production department at the beginning of the process. Labour and overhead costs are incurred continuously throughout the process. The following information has been extracted from Happy (Pty) Ltd.'s records for the month of January 2021.

Opening work in progress at 1 January 2021	
Percentage of process completed	40%
Physical units	2 000
Materials cost	R36 000
Conversion costs	R11 200
During the month of January 2021	
Units started	28 000
Materials added	R560 000
Variable overheads	R128 250
Fixed overheads	R300 000

Closing work in progress at 31 January 2021	
Percentage of process completed	60%
Physical units in process	4 000

- Happy (Pty) Ltd values closing stock on a FIFO basis.
- The wastage point is at the 45% completion stage and normal losses of 3% are expected.
- 24 000 units were completed and transferred at the end of January 2021.

Part B

The worldwide COVID 19 pandemic has been detrimental to Happy (Pty) Ltd. Their revenue for 2020 has decreased significantly compared to the 2018 and 2019 financial years. Mr Kim, the managing director, has decided that the only way Happy (Pty) Ltd can improve their financial position, is by diversifying their product offering. The lab technicians and research teams have spent months investigating possible products. Based on this research, Happy (Pty) Ltd has begun producing and selling three different products in 2021. These are a: 70% alcohol-based hand sanitiser called Happy Hands; a disinfectant cleaning spray called Happy Spray; and household cleaning wipes called Happy Wipes. The following information relates to their first month of trading January 2021:

	Added processing costs per unit	**Selling Price per unit**
Happy Hands	R13	R30
Happy Spray	R12	R80
Happy Wipes	R18	R60

- The management accountant, Mr Radebe, calculated the joint costs to be R368 000 per batch of output. Two batches were completed in January 2021.
- Each batch of output produces: 30 000 units of Happy Hands which is sold in 250ml bottles; 20 000 units of Happy Spray which is sold in 500ml bottles; and 5 000 units of Happy Wipes, which contain 60 individual wipes in each unit.

Required:	
Prepare the quantity statement for the month of January 2021.	(11)
Calculate the Rand value of the normal loss.	(5)
Explain the changes to the quantity statement calculated in part 1, should wastage take place at the 65% completion stage instead. [Calculations are not required.]	(4)

Calculate the gross profit percentage achieved for Happy Hands, Happy Spray and Happy Wipes for the month of January 2021, assuming that the joint costs are to be assigned on a physical units basis. (10 marks)

Ceram (Pty) Ltd (LU11)

(Marks: 35)

Kimen Chetty is the production manager at Ceram (Pty) Ltd, "Ceram". The company, based in the Western Cape of South Africa, is a leader in the ceramic tile manufacturing business. For over 25 years, the company has been supplying tiles to contractors and retailers. Ceram has built a reputation for great quality, durable products at competitive prices.

Mr Paulus, the sales manager, approached Mr Kimen Chetty after the management meeting last week with an opportunity for Ceram to provide a quote to KLA Construction (Pty) Ltd, "KLA". KLA is a new construction company in Cape Town. Started by two brothers Wikus and Hanre Botha, KLA has grown substantially over the past year.

KLA has recently been in the news after a video surfaced online showing a heated debate between Wikus and a cement supplier over non-payment from KLA. KLA has recently been appointed as the lead construction team for a new exclusive property development in Cape Town.

Kimen has asked for your help in preparing the tender for 10 000 tiles. During your last meeting with him, the following notes were made:

- The company labourers will have to work overtime in order to supply the tiles. The overtime rate is 15% more than the normal wage rate of R24 per hour.
- It is estimated that the labour required to produce one tile is 3.75 hours.
- The production process requires that the tiles be baked in an oven at temperatures around 2 000 degrees Fahrenheit. Each tile is baked for four hours. Depreciation of the oven is R4 150 per month.
- One tile will require 850g of clay. There is 6 000kg of clay in stock at present. All tiles are made using clay. The current stock was purchased in the previous year at R190 per 1 500g. Currently the clay can be purchased at R200 per 1 500g.
- KLA would like each tile to bear their logo at the far-right corner. This will require a specialised stamp. The stamp is made in Germany and is expected to cost R22 000.
- Ceram's current factory cannot be used for this project. Ceram will rent space from another tile manufacturer Tilex (Pty) Ltd in the same area. The space will require upgraded lighting at a cost of R12 000 and cleaning at a cost of R1 300. Ceram will be responsible for these costs.
- The mixer at Tilex (Pty) Ltd.'s premises is currently not operational. Ceram can either fix the existing mixer at a cost of R12 500 or purchase a new mixer for R20 000. If Ceram chooses to fix the existing mixer, Ceram (Pty) Ltd will purchase the mixer from Tilex (Pty) Ltd at the end of the project for an additional R9 500.

- To secure the premises, a rent deposit of R20 000 will have to be paid. The monthly rental charge for the new premises will be R18 000 per month and the project will be running for nine months. The lessor will only allow a minimum of 12 months rental.
- The variable manufacturing overhead at present is R60 per tile.
- The fixed manufacturing overheads at present are R33 per tile. Total fixed overheads will not increase as a result of the tender.
- Benji Mabanda will be transferred from his current position to oversee the manufacturing process. His salary is currently R22 000 per month. At the end of the project, he will return to his present position. His current position will be filled during the project by a temporary staffing arrangement with JIT Recruiters. JIT Recruiters will charge a monthly fee of R18 000 per month. A once off initiation fee of R3 500 will also be applicable.
- The new project will have to bear its portion of the fixed monthly management fee. The management fee is incurred monthly regardless of the tender taking place, however, a portion of the fee is allocated to all product lines. Mr Kimen Chetty has calculated the fee allocated to this tender to be R1 250 per month.
- Ceram's existing company policy is to add a 25% mark-up to its products. However, Mr Paulus, who is married to Elmarie Botha (sister to Wikus and Hanre) has instructed a 20% mark-up for this project.
- VAT is added after the mark-up has been applied to finalise the selling price for the invoice.

Required:

	Determine the price that Ceram (Pty) Ltd should include in their tender application to KLA Construction (Pty) Ltd, using relevant costing principles. For each cost not included, provide a reason. [Round to all amounts to the nearest whole number]	(30)
	List other factors that Ceram (Pty) Ltd should consider in deciding whether to tender or not.	(5)

Sustain (Pty) Ltd (LU 8)

(Marks: 55)

Sustain (Pty) Ltd, ("Sustain") operates in the renewable energy industry. The company manufactures solar panels in their factory in Pinetown, KwaZulu-Natal. Sustain uses the variable costing method to report a monthly statement of comprehensive income to their management team.

You have recently joined Sustain in the position of junior management accountant and have been asked to assist with the preparation of upcoming budget statements. After meeting with Mrs Davies, you have deduced the following:

	Budget April 2022	**Budget May 2022**	**Budget June 2022**	**Budget July 2022**
Sales units	4 000	5 500	4 000	**5 000**
Closing inventory	?	1 400	?	**3 000**

- The budgeted selling price per solar panel in April and May was R3 120. The selling price will increase by 20% from June 2022. No further increases are expected in July 2022. 50% of monthly sales are cash and the balance are on credit. 60% of all credit sales are received in the month after the sale is made and the balance is received two months after the sale is made.
- The raw materials used in the production of each solar panel costs R1 100. As a result of planned bulk purchases, this cost is expected to decrease by 5% per unit from July 2022. Raw material purchased during a month is settled over two months. Forty-four per cent is paid in the month of purchase and the balance is settled in the following month. No stock of raw materials is held in inventory.
- Closing stock at the end of each month is usually equal to 35% of the units required for the following months sales. As an exception, there was no opening stock on hand budgeted at the beginning of May 2022.
- The labour costs are semi-variable. At an average monthly production level of 5 400 units, the labour cost per unit is R350, of which 40% is fixed. Labour costs are paid in the month in which the cost was incurred. These costs are not expected to change for the foreseeable future.
- Variable manufacturing overhead costs are R250 per unit in April and May 2022 and will increase by 10% from June 2022. No further increases are expected in July 2022.
- Fixed manufacturing overhead costs are budgeted at R5 280 000 for the year. Twenty per cent of this cost represent depreciation of the factory equipment. These costs are not expected to change for the foreseeable future. Fixed manufacturing overheads are incurred evenly throughout the year.
- Both variable and fixed manufacturing overheads are paid in the month in which the cost was incurred.

- Variable selling costs incurred amounted to R82 500 in May 2022. Selling costs are paid in the month following the sale. The variable cost per unit is expected to remain the same for the foreseeable future.
- The opening cash balance as at 1 June 2022 was R194 000.
- Sustain uses the weighted average method of inventory valuation.

Required:

	Prepare the budgeted statement of comprehensive income for the month of June 2022, using the direct costing method. [Round to all amounts to the nearest whole number]	(22)
	List two differences between the absorption and direct costing statements.	(2)
	Prepare the cash budget for the month of June and July 2022. Use separate columns for each month.	(31)

Coffee Bean (Pty) Ltd (LU 8)

Coffee Bean (Pty) Ltd roasts coffee beans and specialise in roasting one blend of coffee only. The company sell to coffee chains and package the beans in bags of 1 kilogram.

Currently the company reports on an absorption costing basis. The company experienced exponential growth in the past two years and is considering implementing a direct costing system for management accounting purposes. You have extracted the following actual results for the year ended 30 April 2018:

Variable costs:	
Sales	125 000 bags
Sales revenue	R10 000 000
Direct material	R25 per kilogram
Packaging	R7 per bag
Direct labour	R15 per kilogram
Variable manufacturing overheads	R5 per kilogram
Selling and distribution costs	5% of the selling price
Fixed costs:	
Fixed manufacturing overheads	R132 000
Administrative costs	R156 000
Selling and distribution	R 72 000

The following budgeted information for the year ended 30 April 2019 was provided:

- The selling price will be increased with 10%. Due to the increase in selling price the sales volume is expected to decrease with 5%.
- All coffee beans are imported from Ethiopia. Due to the weakening of the Rand and continued drought in Africa the direct material is expected to increase with 20% per kilogram. There were no opening or closing inventory for coffee beans.
- The company has a contract with the packaging supplier. The contract ends on 31 October 2018 after which the packaging per bag will increase to R8 per unit. Sales and production takes place evenly throughout the year.
- Direct labour is expected to increase with 7%.
- Variable manufacturing overheads and variable selling and distribution costs will remain the same as in the 2018 financial year.
- Fixed manufacturing costs will increase with 6%. This is in line with inflation.
- Due to restructuring, fixed non-manufacturing costs is expected to remain the same as in the 2018 financial year.
- The following information regarding kilograms were extracted from the inventory system:

Details	2018 (Actual)	2019 (Budgeted)
Opening inventory (finished goods)	12 500 kg	?
Production (finished goods)	130 000 kg	115 000 kg

- The value of opening inventory for the 2018 financial year was R625 000 based on the absorption costing basis. The company uses the weighted average method of inventory valuation. There were no opening or closing balances for work in progress.

Required:	
Prepare the budgeted statement of comprehensive income for the period ended 30 April 2019 based on the absorption costing method.	(20)

GenCorp (Pty) Ltd (LU 8)

Gen Corp (Pty) Ltd is a company that manufactures and sells generators in the Gauteng area. Sales have increased significantly due to the increase in load shedding in South Africa and the company is considering introducing the preparation of management accounts. Gen Corp (Pty) Ltd has asked your assistance in the preparation thereof. You have obtained the following actual financial information for the month ended 30 April 2019:

Sales	R2 162 400
Direct material	R770 000
Direct labour	R218 400
Variable manufacturing overheads	R120 960
Fixed manufacturing overheads	R80 500
Administrative expenses	R60 250
Selling and distribution expenses	R43 600

The company had opening inventory units of 56 generators, manufactured 280 generators and sold 272 generators for the month of 30 April 2019.

Additional information:

- It is company policy to maintain a closing inventory equal to 20% of the following month's production. Sales units for May 2019 are budgeted to be 314 generators.
- The company only sells one product, a 5.5 kva powered generator, which is perfect for household use. The company is confident that they can increase the price by 5% during May 2019 because load shedding has always increased during winter months.
- Direct material cost per unit will increase to R2 920 per unit.
- Due to increased production the labour cost per generator is expected to increase with 8% in order to maintain positive employee morale. Direct labour costs consist of assembly costs and inspection costs. Assembly costs for April 2019 were R42 per hour; it takes 12 hours to assemble one generator. Inspection is done by an expert. Inspection for April 2019 was performed at a cost of R138 per hour and inspection takes two hours per generator.
- Variable manufacturing overheads vary in line with assembly hours and costs for May 2019 are expected to be in line with April 2019.
- Administrative expenses are fixed in nature. Both fixed manufacturing overheads and administrative expenses are expected to increase with 8% from April 2019 to May 2019.
- Selling and distribution expenses include both fixed and variable costs. The selling and distribution expenses for May 2019 are expected to be R45 700. Fixed costs in total and variable costs per unit for May 2019 are expected to be in line with April 2019.
- The company uses the weighted average method of inventory valuation. The value of opening inventory as at 1 May 2019 was correctly calculated as R253 568.

Required:	
Prepare the budgeted statement of comprehensive income for the month ending 31 May 2019 based on the direct costing method. (Round all unit cost to two decimal places. Totals should be rounded to the nearest Rand.)	(25)
Explain the change in profit should the statement of comprehensive income be prepared based on the absorption costing method. Clearly explain whether profit will increase or decrease.	(3)
Reporting based on the direct costing method is mainly used for management decision-making purposes. It is therefore important that these reports are generated timeously, and that information is reliable. Explain why there might arise a conflict between the timeliness and reliability of financial reports.	(2)

Stevia Limited (LU 8)

Stevia Limited manufactures and sells meal-replacement shakes to the weight-loss industry. The company allocates fixed manufacturing overheads on the basis of machine hours. Each meal-replacement shake takes 0.5 machine hours to manufacture. The budgeted overhead allocation rate for the 2019 year is R15 per machine hour. The budgeted fixed manufacturing overheads amount to R1 350 000 for the year.

The Actual information for February 2019 is provided below:

Direct material per meal-replacement shake	R3.25
Direct Labour (Total for the month)	R45 363
Actual fixed manufacturing overheads for the month	R50 449
Variable manufacturing overheads (Total for the month)	R17 500
Variable administration costs (per unit)	R1.94
Variable marketing cost (per unit)	R0.94
Sales price	R23
Fixed administration costs (Total for the month)	R91 000

Additional information:

- The selling price per meal-replacement shake will increase by 15% for the month of March 2019.
- The employees are expecting a 10% increase as from 1 March 2019. The directors have agreed to the increase and are communicating this with the respective human resource managers. No employees resigned during February 2019 and no new employees were hired during February 2019.
- Employees worked a total of 168 hours during February 2019. There is one extra working day in March 2019. Employees work 8 hours a day. Production was very low during February 2019 due to load-shedding by Eskom. The employees cannot be penalised for this and were paid for the hours they were at work.
- The company's current material supplier has recently emailed the Chief Financial Officer (CFO) and informed him that the ingredients used in the manufacturing of the meal-replacement shakes will increase in price as from 1 March 2019. The current expectation is a 10% increase.
- A stock take was conducted on 28 February 2019 and it was determined that there were 1 800 units of finished goods on hand. There was no opening inventory of finished goods on 1 February 2019. There was no opening or closing inventory for the month of March 2019 for raw materials or work-in-progress.
- The manufacturing statement was received from the factory manager. Units produced during February 2019 amounted to 14 000. He expects to manufacture 20 600 units during March 2019.
- Sales units for March 2019 are expected to increase by 56% from February 2019.

- Variable administration costs and variable marketing costs vary with units sold.
- Variable manufacturing overheads change in direct proportion to the change in production.
- All other costs will remain consistent with February 2019.
- The company uses the First-In-First-Out method to value inventory.

Required:	
Calculate the total cost per meal-replacement shake for the months of February 2019 and March 2019. Clearly distinguish between the variable and fixed costs of the product. (Round all unit cost to two decimal places. Totals should be rounded to the nearest Rand.)	(8)
Using the direct costing method, compile the statement of comprehensive income for the month ended 31 March 2019.	(14)
Explain the difference between using the First-in-First-Out method of inventory valuation and the Weighted Average method of inventory valuation.	(3)

Tantalising Toys (Pty) Ltd (LU 8)

Tantalising toys Ltd makes a toy called The Alternator 2017. The company was started in 2016. The selling price for The Alternator 2017 in the 2017 financial year is R540. The selling price is expected to increase next year (2018) with 10%. You have been provided with the following information regarding the toy:

Year	Manufactured	Sold	Closing inventory
2016	2 500 units	2 350 units	?
2017	2 760 units	2 800 units	?
2018	2 950 units	2 670 units	?

Tony Stark, the CFO, has provided you with the following information regarding the costs of the products:

	2017	**2018**
Variable costs per unit		
Direct Material	80	83
Direct Labour	60	65
Variable manufacturing overheads	25	28
Variable selling costs	35	42
Fixed costs in total		
Fixed manufacturing overheads	65 000	68 000
Fixed selling costs	15 000	17 000
Fixed administrative overheads	22 000	26 000

The company makes use of the weighted average method of inventory valuation. You can assume that the prior year weighted average cost per unit was R165 (variable manufacturing costs only), the fixed cost portion worked out to be R23.55 per unit.
There were no opening or closing stock for materials or work in progress.

Required:	
Prepare the budgeted statement of comprehensive income for the year ended 31 December 2018 according to the direct costing method.	(14)
Reconcile the difference in profits according to the two methods if the net profit from the absorption costing method is R900 378 and the weighted average cost per unit for the closing inventory is R198.67.	(6)

Comfy Seats (Pty) Ltd (LU 8)

Comfy Seats (Pty) Ltd, a South African based company, manufactures and sells aeroplane seats. In 2019 Comfy Seats (Pty) Ltd signed a contract with Skybus (Pty) Ltd to be their sole supplier of seats for the B318 aeroplane. The B318 aeroplane is the smallest airliner manufactured by Skybus and seats 100 passengers. The more comfortable business class seats make up 18 of the 100 seats, the remainder are economy class seats. In 2019 Skybus (Pty) Ltd bought seats for eight B318 aeroplanes.

In light of a few cost changes since 2019 and given that it is only the second year that they supply the seats for the B318 Aeroplane, Comfy Seats (Pty) Ltd has asked your assistance in the preparation of management accounts.

Comfy Seats (Pty) Ltd has provided you with the following actual financial information for the 2019 financial year (This information pertains to the B318 economy class seats only):

Economy class seats	**R**
Sales	9 840 000
Direct material	1 940 000
Direct labour (R190 per hour)	2 211 600
Variable manufacturing overheads	1 885 680
Fixed manufacturing overheads	776 000

Additional Information:

1. As per the contract with Skybus (Pty) Ltd, Comfy Seats (Pty) Ltd are required to supply seats for ten B318 aeroplanes in 2020. It is expected that they will be able to supply all the seats required.
2. The selling price for both business class and economy class seats are expected to increase by 10% in 2020.
3. The 2019 financial year is the first year that Comfy Seats (Pty) Ltd produced B318 aeroplane seats. The opening inventory of economy class seats for 2020 was 120 seats. The weighted average method is used to value inventory.
4. The company is expecting to maintain a closing inventory of 20% of the 2020 sales.
5. Direct material costs per seat for both business class and economy class seats are expected to stay the same for 2020.
6. Labourers were unhappy with their wages and went on stike during 2019. During the strike Comfy Seats (Pty) Ltd negotiated a wage increase with the relevant labour union, an increase of 5% was agreed for 2020.
7. Direct labour hours in 2019 were 15 hours per economy class seat. Due to the 2020 wage increase and increased morale it is expected that labour hours per economy class seat will reduce by 20%.

8. Variable manufacturing overheads vary in line with direct labour hours. The cost for 2020 is expected to be in line with 2019.
9. Fixed manufacturing overheads will remain the same in 2020.
10. Selling expenses are semi-fixed in nature and expected to be R820 000 in 2020. Should Comfy Seats (Pty) Ltd sell 1 000 seats the total selling costs would be R856 000.

Required:	
Prepare the budgeted statement of profit/loss of economy seats for the 2020 financial year, according to the absorption costing method.	(23)
Calculate the contribution for 2020 should the direct costing method be used. Shortly state why the contribution calculated is more or less than the gross profit.	(12)

Tops (Pty) Ltd (LU 8)

(Marks: 30)

Tops (Pty) Ltd ("Tops") is a small -medium enterprise based in Gauteng. The company was started in 2008 and manufactures a single product.

Mrs Wendy Kundishora is the head management accountant and has been employed at the company for over ten years. Tops held their annual planning meeting for the year, three months before the start of their 2023 financial year in July. At the meeting, Mrs Kundishora presented a budgeted income statement for the upcoming financial year, based on direct costing principles. The other directors at the meeting were very confused by the statement. Mr Brown's comment on the direct costing statement presented was "*Why do we have to keep changing the way we do things! Historically, we've used the absorption costing method. I believe that it is accurate. How can we trust that this new statement is correct? Will it give us the same profit figure? Are our auditor's going to be happy with this?"*

The following information regarding the budget for the 2023 financial year has been made available to you:

- The sales department has indicated demand for the 2023 financial year to be 63 000 units. The selling price is expected to remain unchanged at R150 per unit.
- Tops has budgeted on producing 64 960 units in 2023. This is an increase in production of 16%.
- Direct material costs for 2022 were R44 per unit. Tops has been advised by their supplier that the raw material costs will increase by R1.75 per metre. Tops currently uses half a metre for every unit produced.
- The labour cost per hour was R23 in 2022. After considerable thought, Tops has decided to use lower skilled labourers in 2023. This will result in a saving of 25% per hour. Each unit requires 1.25 labour hours.
- Variable manufacturing overhead costs in 2022 was R1 064 000. Variable overhead costs vary with the number of units produced. The variable overhead cost per unit is expected to increase by R2 per unit in 2023.
- Fixed overhead costs are budgeted to be R3 300 000 for the 2023 year. Budgeted fixed overhead costs in 2022 was R2 856 000.
- Closing stock at the end of 2022, consists of 3 850 units, valued according to direct costing principles at R254 100.
- Tops uses the weighted average method of valuation.
- Selling and distribution costs are semi-variable. The selling and distribution costs in the below table were incurred during the last quarter of 2022. The variable portion of selling and distribution costs is expected to increase by 40% per unit in 2023 whereas the fixed portion will remain the same.

nth	**ts sold**	**al cost**
	50	800
	00	900
	60	540

REQUIRED:

	Prepare an email to Mr Brown addressing his concerns on the direct costing statement.
	Prepare the budgeted income statement for the 2023 financial year, according to the absorption costing method. (Round amounts to the nearest whole number.)

Steelvale (Pty) Ltd (LU 8)

Steelvale (Pty) Ltd is a manufacturer of components used in the steel industry. The company is based in Pinetown. You are the newly appointed management accountant and have been asked to prepare the budgeted statement of profit/loss for the 2021 financial year ended 31 December 2021. You have been provided with the following information:

Manufacturing costs
The table below shows the manufacturing costs for the 2020 financial year at two different production levels.

Cost	**5 000 units**	**10 000 units**
Raw material	R25 000	R50 000
Construction cost	R70 000	R80 000
Assembly costs	R30 000	R60 000
Other manufacturing overheads	R70 000	R70 000

Variable costs for the 2021 financial year are expected to increase by 5.5% while fixed costs are expected to remain the same as 2020. 6 000 units were manufactured during the 2020 financial year.

Closing stock
The inventory balance on the statement of financial position as at 31 December 2020 consists of R4 000 (Raw material) and R35 000 (Finished goods).

Steelvale (Pty) Ltd expects budgeted closing stock for the 2021 financial year to consist of R6 000 worth of raw material and 200 finished goods. There was no opening stock of inventories on 1 January 2020.

Sales
Steelvale (Pty) Ltd estimates that 6 500 finished goods will be sold in the 2021 financial year. Selling costs were constant at R2 per unit in the previous year. The selling costs are expected to increase by R1.50 per unit for the 2021 financial year. The budgeted selling price per unit has been set at R150. Steelvale (Pty) Ltd uses the FIFO method of inventory valuation.

Required:	
Prepare the budgeted statement of comprehensive income for the financial year ended 31 December 2021, based on absorption costing principles. [Round all units to the nearest whole number.] [Round all costs to two decimal places.]	(21)
Calculate the budgeted contribution per unit for the 2021 financial year.	(3)
Prepare an email to the managing director explaining the difference between direct and absorption costing. [Calculations are not required.]	(6)

Beta Pharm (Pty) Ltd (LU 8)

Beta Pharm (Pty) Ltd ("Beta Pharm") is a company that discovers, develops and produces pharmaceutical drugs for use as medication. They deal in generic medication used to treat patients. There is a variety of laws and regulations that govern this industry regarding safety, testing and efficacy. Beta Pharm uses an absorption costing system for reporting purposes. Beta Pharm has a 30 April financial year end. The company applies the weighted average method of inventory valuation.

One of the medications they produce, Medoprolol, is for treatment of high blood pressure. As this is a very popular product, Medoprolol has its own separate division within the company. Below information pertaining to the Medorprolol division for the 2020 and 2021 financial year.

Actual material cost incurred was R1 386 220 in total for 2020. The material cost is expected to increase by 20% in 2021.

The budgeted selling price for the 2021 financial year amounted to R65 per box.

The company budgeted to produce 34 000 boxes of Medoprolol monthly in 2021. This is 1 000 more boxes per month than 2020.

Sales forecasts indicate that 32 000 boxes will be sold monthly in 2021 and 2022. It is the company's policy to keep 80% of the following month's budgeted sales units in stock.

There was no opening or closing stock for raw materials or work-in-progress.

Budgeted other variable production costs amount to R15 per box for the 2021 financial year.

Actual fixed production overheads for the 2019 and 2020 financial year was R1 980 500, incurred evenly throughout the year. Budgeted fixed production overheads for the 2021 financial year are expected to decrease by 5%.

Opening inventory is valued at R25.40 per box.

Beta Pharm expects administration costs and distribution costs for the 2021 financial year to be R2 000 000 and R3 500 000 respectively. The administration and distribution costs for the company are allocated to each division based on the revenue created by each division. The Medoprolol division accounts for 30% of the total revenue of the company.

Required:	
Prepare a budgeted statement of comprehensive income for the year ended 30 April 2021 for the Medoprolol division.	(20)
Explain whether the closing inventory value would differ had the direct costing method been used instead. Use calculations to support your answer. [Discussion: 3 marks, Calculations: 7 marks.]	(10)

Muggles (Pty) Ltd (LU9 & LU10)

Marks 40

Ms Amani recently inherited a business, Muggles (Pty) Ltd ("Muggles"), from her father. The business manufactures coffee mugs and has been in the family for more than 50 years. The Muggles factory is in Johannesburg and the company mainly sells their products within the borders of South Africa.

Coffee mugs are made with clay by hand and then fired in a kiln. Quality is very important to the Amani family and Muggles has an excellent reputation for providing great quality coffee mugs. Muggles' financial results have been disappointing in recent years and Ms Amani has decided to implement changes in the hope of improving profitability.

The **budgeted** demand and **standard** product specifications for the year ended 31 May 2022 are indicated below:

	Coffee Mug
Sales demand (units)	15 000
Normal production capacity (units)	20 000
Clay per unit (grams)	400
Labour hours per unit	1.2
Kiln time per unit (hours)	3
Selling price per unit	R395

Budgeted production has been set at expected sales demand for many years. The standard cost card indicates that the clay is usually sourced locally for R85 per kilogram. Labourers are paid a standard rate of R35 per labour hour. The labourers have been working for the company for many years and are highly skilled in the manufacturing of the mugs. The manufacturing process of the mugs is very intricate.

The electricity for the kiln amounts to R20 per hour. This rate excludes other variable manufacturing costs. The electricity used for miscellaneous purposes is included in the fixed manufacturing overheads. Other variable manufacturing overheads are allocated at R15 per labour hour. The fixed manufacturing overheads are budgeted to be R1.175 million.

Actual results for the year ended 31 May 2022 revealed the following:

Ms Amani has made some significant changes to the operations of the company during the 2022 financial year, including changing suppliers of raw material, introducing less skilled labourers in order to pay less in labour costs, significantly reducing fixed overheads and an attempt to increase selling prices. There was no opening inventory as at 1 June 2021.

Actual figures for coffee mugs for the year ended 31 May 2022 are as follows:

Sales		R5 320 000
Cost of sales:		
Clay	(7 200 kg)	R576 000
Labour	(44 800 hrs)	R 896 000
Kiln time	(51 200 hrs)	R1 013 760
Variable manufacturing overheads		R 716 800
Fixed manufacturing overheads (Actual)		R920 000

The total number of coffee mugs produced and sold during the 2022 financial year was 14 000. The increase in the selling price resulted in a low demand and therefore Ms Amani had to sell mugs at a discount in order to increase sales volume.

Required:

Calculate the budgeted profit for the year ended 31 May 2022.

Prepare only the following variances for the year ended 31 May 2022:

- Sales price variance (2)
- Materials price variance (2.5)
- Materials usage variance (3.5)
- Labour rate variance (2)
- Labour efficiency variance (3.5)
- Kiln rate variance (2)
- Kiln time variance (3.5)
- Fixed overhead expenditure variance (2)
- Overall Layout and Presentation (1)

Prepare an email to Ms Amani discussing probable reasons for the following variances as calculated in **Q.3.2**. (Use headings in your email to separate the variances.)

- Materials price variance.
- Materials usage variance.
- Labour rate variance.
- Labour efficiency variance.
- Kiln rate variance.
- Kiln usage variance.

Wellworths Ltd (LU 10)

You are a junior accountant at Wellworths Limited. Wellworths Limited is a clothing manufacturer. Mr Xolani, the managing director of Wellworths Limited has asked you to compare the budgeted data to actual information for the ladies jeans division for the month of March 2020. He has given you the following information:

Wellworths Limited uses a standard costing system. The standard production requirements to produce half a dozen pairs of jeans are 15 meters of Material and 4 hours of direct labour. Overheads are applied on the basis of direct labour hours and has been determined based on an annual capacity of 57 600 pairs of jeans. At this level, overhead is 25% fixed and 75% variable. Material price is budgeted at R4/metre while direct labour is expected to cost R20/hour. The budgeted rate for total overheads is R13.50 per hour.

Actual information for the month of March 2020:

- 4 680 pairs of jeans were produced, using 12 500 metres of material.
- Material purchased and issued to production in March cost R35 200.
- The labour rate actually paid in March was 17.5% higher than budgeted.
- The labour rate variance for the month of March was R11 270 unfavourable.

Required:	
Prepare a standard cost card for one pair of jeans.	(6)
Calculate the following: • Material price variance (2.5) • Material usage variance (3.5) • Actual hours (3.5) • Labour efficiency variance (3.5) and Variable overhead efficiency variance (4).	(17)
Discuss possible reasons for the following: • An unfavourable material usage variance • An unfavourable labour efficiency variance and • A favourable material price variance.	(7)

Moola Money Ltd (LU 10)

MoolaMoney Ltd manufactures yoghurt. The company operates a standard costing system. The following information is available for May 2019.

In order to manufacture one 10-litre gallon of yoghurt, the standard material input is 16 litres of milk at a standard cost of R25 per litre. The standard labour rate is R50 per hour and six hours are allowed to produce one 10-litre gallon of yoghurt. Fixed production overheads are absorbed at a rate of 120% of direct labour cost. During May 2019 the following occurred:

- The actual material price paid was R24.50 per litre.
- The total direct labour cost for May 2019 was R1 215 000.
- Fixed production overhead costs for May 2019 amounted to R1 500 000.
- 160 000 litres of milk were purchased and 66 720 litres were used in the current month under review.

The variances for May 2019 are as follows:

Variance	Favourable	Adverse
Direct material price	?	
Direct material usage		R60 000
Direct labour rate		R45 000
Direct labour efficiency	R36 000	
Fixed production overhead expenditure		R60 000

Required:

Calculate the following for May 2019: (18)

- budgeted output in units;
- direct material price variance;
- number of litres used above standard allowed;
- actual units produced;
- actual hours worked;

average actual direct labour rate per hour.

Write an email to the Managing Director of MoolaMoney Ltd explaining possible reasons for the variances for May 2019. (12)

Labmet (Pty) Ltd (LU 10)

Labmet (Pty) Ltd is a COVID testing laboratory that was initiated by the MediX Hospital Group to assist with the demand for COVID 19 tests. Prior to the initiation of the testing laboratory, the medical director, Dr Karim created a budget based on information collected at other laboratories around the country. Medix Hospital Group has now requested an analysis of the actual costs in relation to the budget costs. Dr Karim has asked you to assist in creating the analysis for the upcoming management meeting. Below is the email that Dr Karim has sent to you:

To:MFAC6211student@vcconnect.co.za

From:DrKarim@Labmet.co.za

Subject: Analysis Labmet Actual vs Budget

Dear MFAC6211 student, I hope you are doing well.

As discussed over the phone earlier today, I need your assistance in preparing a reconciliation of budget to actual costs for the month of December 2020. I have attached two documents to assist you, the first is the budget that I prepared for December 2020 and the second document, the lab assistant has sent to me. The lab accountant is off sick for the next few weeks, so we're going to have to make do with what we have.

Please can you get back to me with your analysis by tomorrow afternoon. The executives at MediX need this information urgently.

Kind Regards

Dr Karim

Attachments from email: 1) December Budget.xls

Costs per test	Details
Specimen bag and swob	Two bags are required for each test. These cost R4 each and are diposed of after the test is completed.
Labour	Each test needs 0.3 hours of a junior lab assistant's time and R0.2 hours of a senior lab assistant's time. Junior lab assistants are paid R70 per hour and senior lab assistants R90 per hour.
Variable Overhead	Variable overhead is based on lab assistants' hours. R15 per lab assistant hour.
Fixed costs	Cost estimated at R250 000 per month
Charge per test	Charge R150 per test
Expected tests in December	5 000 tests

2) Actual cost report (December 2021). Xls

December Cost info	
Number of tests conducted	8 400 tests were actually conducted.
Fee charged	Patients were charged a fee of R200 per test.
Specimen bag and swabs costs	22 000 specimen bags and swobs were purchased and used in December. These cost R120 000.
Labour costs	Total labour cost - R400 000 30 % of cost = senior lab assistants, R100 per hour 50% of cost = junior lab assistants, R80 per hour 20% of cost = supervisors cost, R80 000 per month
Variable overhead cost	R50 000
Fixed Costs (excluding supervisor salary)	R500 000

Required:	
Calculate the following variances that will be included in your report to Dr Karim: • Sales price variance (2 marks) • Material price variance (2 marks) • Material usage variance (2.5 marks) • Labour rate Variance (7 marks) • Labour efficiency variance (5 marks) • Variable overhead rate variance (2.5 marks) • Variable overhead efficiency variance (3 marks) • Fixed overhead expenditure variance (2 marks)	(26)
Give reasons for the following Labmet (Pty) Ltd variances: • Unfavourable material quantity variance (3 marks) • Unfavourable material price variance (3 marks) • Favourable labour efficiency variance (3 marks)	(9)

CompuBest (Pty) Ltd (LU 9 & 10)

Compu Best (Pty) Ltd is the parent company of two subsidiaries: Software (Pty) Ltd and Hardware (Pty Ltd. You have been appointed as the group financial director.

PART A

Software (Pty) Ltd develops computer systems. The company management accountant prepared the following budgeted contribution statement for March 2018:

	R
Sales	2 420 000
Less: Variable costs	735 000
Opening inventory	80 000
Purchases	750 000
Less: Closing inventory	(120 000)
Variable selling costs	25 000
Contribution	**1 685 000**
Less: Fixed costs	736 000
Production overheads	580 000
Administrative overheads	156 000
Net profit before tax	**949 000**

Additional information:

- The credit balance per the bank statement on 1 March 2018 is expected to be R 110 000.
- Cash sales will amount to 50% of total sales for March. In April, cash sales as a percentage of total sales are expected to increase to 60%.
- 60% of inventory purchased in March will be on a cash basis. All March credit purchases will only be paid in April or May.
- The company's total credit purchases in February amounted to R 360 000. 80% of February credit purchases will be settled in March and the remaining balance has to be settled in April.
- Cash receipts in March in respect of credit sales of February amounted to R 280 000.
- Total depreciation amounts to R 300 000 per month and is included in the budgeted fixed costs above.
- All other expenses in the above contribution statement will be incurred on a cash basis.
- During March 2018 the company is expected to settle a liability of R 82 000 in cash.

Required:	
Prepare a cash budget for March 2018 and calculate the expected closing balance in the bank account as at 31 March 2018. Ignore taxation.	(7)
List six sub-budgets that can be included in the master budget.	(3)

PART B

Hardware (Pty) Ltd manufactures laptop batteries and supplies them to computer stores in the Sandton area. The company has a manufacturing plant in Midrand, Johannesburg. Hardware (Pty) Ltd uses a standard costing system. The company uses two types of material for the manufacturing of these batteries, material Metal 1 and material Metal 2.

The following information has been obtained pertaining to the year ended 31 December 2017:

1) The company budgeted to manufacture and sell 6 000 units. Only 5 000 units were manufactured and sold.
2) The standard cost per unit for material Metal 1 was R13.60 (0.85kg at R16 per kg). During the financial year 4 000kg of Metal 1 were purchased at a total cost of R70 000.
3) The standard cost per unit for material Metal 2 was R12.75 (0.75kg at R17 per kg). During the financial year 3 500kg of Metal 2 were purchased. There were no opening or closing inventory for Metal 2.
4) The company budgeted to work 60 000 labour hours at a rate of R13.50 per hour. 55 000 labour hours were worked. The company had a unfavourable labour rate variance of R27 500.
5) Variable manufacturing overheads vary with labour hours worked. The budgeted rate was R4.50 per hour.

Required:	
Calculate the following: (i) Material price variance for material Metal 1. (ii) Material usage variance for material Metal 2. (iii) Actual labour rate. (iv) Labour efficiency variance. (v) Variable manufacturing overheads efficiency variance. [Round all answers to two decimal places, where applicable.]	(17)
Discuss four reasons for an unfavourable material usage variance.	(4)
Discuss four reasons for an unfavourable labour efficiency variance.	(4)

Ceram (Pty) Ltd (LU11)

(Marks: 35)

Kimen Chetty is the production manager at Ceram (Pty) Ltd, "Ceram". The company, based in the Western Cape of South Africa, is a leader in the ceramic tile manufacturing business. For over 25 years, the company has been supplying tiles to contractors and retailers. Ceram has built a reputation for great quality, durable products at competitive prices.

Mr Paulus, the sales manager, approached Mr Kimen Chetty after the management meeting last week with an opportunity for Ceram to provide a quote to KLA Construction (Pty) Ltd, "KLA". KLA is a new construction company in Cape Town. Started by two brothers Wikus and Hanre Botha, KLA has grown substantially over the past year.

KLA has recently been in the news after a video surfaced online showing a heated debate between Wikus and a cement supplier over non-payment from KLA. KLA has recently been appointed as the lead construction team for a new exclusive property development in Cape Town.

Kimen has asked for your help in preparing the tender for 10 000 tiles. During your last meeting with him, the following notes were made:

- The company labourers will have to work overtime in order to supply the tiles. The overtime rate is 15% more than the normal wage rate of R24 per hour.
- It is estimated that the labour required to produce one tile is 3.75 hours.
- The production process requires that the tiles be baked in an oven at temperatures around 2 000 degrees Fahrenheit. Each tile is baked for four hours. Depreciation of the oven is R4 150 per month.
- One tile will require 850g of clay. There is 6 000kg of clay in stock at present. All tiles are made using clay. The current stock was purchased in the previous year at R190 per 1 500g. Currently the clay can be purchased at R200 per 1 500g.
- KLA would like each tile to bear their logo at the far-right corner. This will require a specialised stamp. The stamp is made in Germany and is expected to cost R22 000.
- Ceram's current factory cannot be used for this project. Ceram will rent space from another tile manufacturer Tilex (Pty) Ltd in the same area. The space will require upgraded lighting at a cost of R12 000 and cleaning at a cost of R1 300. Ceram will be responsible for these costs.
- The mixer at Tilex (Pty) Ltd.'s premises is currently not operational. Ceram can either fix the existing mixer at a cost of R12 500 or purchase a new mixer for R20 000. If Ceram chooses to fix the existing mixer, Ceram (Pty) Ltd will purchase the mixer from Tilex (Pty) Ltd at the end of the project for an additional R9 500.
- To secure the premises, a rent deposit of R20 000 will have to be paid. The monthly rental charge for the new premises will be R18 000 per month and the project will be running for nine months. The lessor will only allow a minimum of 12 months rental.
- The variable manufacturing overhead at present is R60 per tile.
- The fixed manufacturing overheads at present are R33 per tile. Total fixed overheads will not increase as a result of the tender.
- Benji Mabanda will be transferred from his current position to oversee the manufacturing process. His salary is currently R22 000 per month. At the end of the project, he will return to his present

position. His current position will be filled during the project by a temporary staffing arrangement with JIT Recruiters. JIT Recruiters will charge a monthly fee of R18 000 per month. A once off initiation fee of R3 500 will also be applicable.

- The new project will have to bear its portion of the fixed monthly management fee. The management fee is incurred monthly regardless of the tender taking place, however, a portion of the fee is allocated to all product lines. Mr Kimen Chetty has calculated the fee allocated to this tender to be R1 250 per month.
- Ceram's existing company policy is to add a 25% mark-up to its products. However, Mr Paulus, who is married to Elmarie Botha (sister to Wikus and Hanre) has instructed a 20% mark-up for this project.
- VAT is added after the mark-up has been applied to finalise the selling price for the invoice.

Required:

	Determine the price that Ceram (Pty) Ltd should include in their tender application to KLA Construction (Pty) Ltd, using relevant costing principles. For each cost not included, provide a reason. [Round to all amounts to the nearest whole number]	(30)
	List other factors that Ceram (Pty) Ltd should consider in deciding whether to tender or not.	(5)

Pattison (Pty) Ltd (LU 11)

Mike Pattison is the finance director at Pattison Products (Pty) Ltd ("Pattison Products"). Pattison Products manufacture bedside tables. Their main customer is the Ethekwini Pediatric Hospital. Three different bedside tables are produced, these are single drawer, double drawer and triple drawer. At a recent budget meeting, Mrs Patricia Ndoro, the marketing manager indicated the demand of the drawers for the next financial year to be as follows: 2 000 single drawers, 8 000 double drawers and 1 200 triple drawers.

Mr Pattison is unsure whether Pattison Products will be able to satisfy the demand, in his opinion machine hours are a limiting factor. He has asked you to investigate further, given the following information:

	Single drawer	**Double drawer**	**Triple drawer**
Selling price	R400.00	R550.00	R750.00
Direct material	R185.00	R196.00	R202.00
Direct labour	R32.25	R43.00	R48.38
Variable manufacturing overhead (based on machine hours)	R6.00	R12.00	R21.00
Machine hours	3	4	7
Selling and distribution costs	?	?	?
Fixed manufacturing overheads	R1.50	R1.50	R1.50

Additional information:

- Pattison Products (Pty) Ltd has 15 machines that are able to work for 10 hours each day.
- Selling and distribution costs are semi -variable . At a sales level of 12 000 units , selling and distribution costs amount to R40 000, whereas at a sales level of 11 000, the total selling and distribution costs are R37 000.
- Pattison Products (Pty) Ltd has 20 500 labour hours available each year. A labour rate of R21.50 per hour is applicable.
- Fixed manufacturing overheads are absorbed per unit.

Pattison Products (Pty) Ltd's factory is operational for 320 days in a year.

Required:	
Prepare a report to Mr Pattison. In your report, discuss: • Explain the term "limiting factor"; • Whether machine hours is a limiting factor; • Whether Pattison Products (Pty) Ltd will be able to satisfy the demand as indicated by Mrs Ndoro; and The number of units of each product Pattison Products should produce and sell to maximise contribution?	(35)

Joe (LU 11)

Joe is currently in the business of construction and has been approached by a school who have asked him to build an extra set of classrooms for them. Joe has spare capacity and would like to make some extra money but is not sure what price to offer the school. Joe charges a standard 50% mark-up on cost. Joe found out you are learning about relevant costing and has made the following information available to you:

Materials needed for the contract:
Bricks will be needed to build the classroom building. Joe estimates that around 2 200 bricks will be needed. He currently has 1 000 in inventory which he purchased for R6 per brick. Joe uses bricks very often in his day to day operations and can purchase new bricks at R8 per brick.

Joe also thinks he will need approximately 10 bags of cement. He has none in stock and can buy a bag of cement for R146.

The classroom windows will be used from Joe's current stock of spare windows that he has collected from old jobs that he has done in the past. The windows have no current use in the business. They originally cost Joe R50 per window to transport to his storeroom. It would cost around R1 500 per window if he were to purchase them from Builders Warehouse. He thinks four windows will be sufficient.

The doors that will be used by Joe originally cost R450 each and Joe currently does have doors in stock, he will need 2. He can resell the doors for R650 to another construction worker now. The doors are not used on a regular basis by Joe.

Joe can use his current labourers (2) to complete the work because they currently have spare capacity. Each labourer earns R50 per day and it is expected that the project will take 100 days to complete. Joe will hire an electrician to do the electricity work and this will cost him R2 000.

Joe is anticipating that the contract will incur cash admin expenses of R7 000.

Joe currently pays around R54 000 a month for other fixed costs. He is anticipating that the new contract will have no effect on this amount.

He will also have to buy a new cement mixer which will cost R25 000. He will not need the cement mixer again and therefore will be able to resell it for R18 000 at the end of the 100 days. Depreciation for the 100 days amounts to R2 200

Required:	
Calculate the relevant cost of the project, give reasons why you are excluding an amount.	(14)
Calculate the price Joe should charge the school for the extra classrooms	(2)
Discuss the four important factors that should be taken into account when making special pricing decisions.	(4)

Moonshine (Pty) Ltd (LU 11)

Moonshine (Pty) Ltd manufactures ornaments for sale in curio shops in shopping malls and at gift shops in game parks. The company currently manufactures three products – Giraffes, Hippos and Elephants. The following budgeted figures for the financial year ended 28 February 2019 are available:

	Giraffe	Hippo	Elephant
Selling price	R50.00	R90.00	R120.00
Product cost			
Metal (R20 per kg)	R5.00	R10.00	R20.00
Wood (R10 per kg)	R7.50	R2.50	R2.50
Beads (R4 per kg)	-	R1.00	-
Labour (R25 per hour)	R25.00	R50.00	R75.00
Overheads (50% variable)	R6.00	R8.00	R10.00
Demand per month	900 units	1 000 units	1 600 units

There are currently 40 labourers who are responsible for production. The labourers are highly skilled in their field, they have been creating these curios for many years, and it will not be possible to train additional labourers over the short-term. The labourers work eight hours per day. Assume 20 working days per month.

Required:	
Determine whether labour is a limiting factor for Moonshine (Pty) Ltd and advise management on the optimal product mix per month in order to maximise contribution.	(25)
Prepare the direct materials usage budget based on the optimal production mix calculated above.	(2)

Mendi Products (Pty) Ltd (LU 11)

Mendi Products (Pty) Ltd is a small family owned business. The business was started by Mrs Peters ten years ago. Mrs Peters is a trained seamstress and began the business making customised bed linen for friends and family. Over the past decade, the business has expanded and currently Mendi Products (Pty) Ltd manufacture two types of bed linen sets. Type 1 “Standard” is mainly purchased by small retail outlets. Type 2 “Hotel” is purchased by small motels and B&B’s.

The following is an extract from Mendi Products (Pty) Ltd.’s most recent financial statements:

Mendi Products (Pty) Ltd Statement of comprehensive income for the year ended 31 May 2020	
Revenue	R 4 225 000
Less:	
Raw Material	R 1 600 000
Direct Labour	R875 000
Manufacturing overheads	R1 275 000
Variable selling costs	R100 000
Profit	R375 000

Notes:

1) 10 000 units were produced and sold in the financial year ended 31 May 2020. The sales mix for the year was 1:1. Revenue recorded for Standard was R1 600 000 and R2 625 000 for Hotel. The company expects that the demand in the 2021 financial year for “Standard will increase by 60%, whilst the demand for “Hotel” however is expected to increase by 21%.

2) Each unit of “Standard” requires R100 of raw material, 10 hours of machine time and 4 hours of labour time.

3) Each unit of “Hotel” requires R220 of raw material in total, 25 hours of machine time and 3 hours of labour time. “Hotel” uses 3 metres of a specific imported raw material which costs R50 a metre.

4) Labour time is restricted to 60 000 hours and cannot be increased. Machine time is currently operating at a level that represents 87.5% of maximum capacity.

5) The manufacturing overheads is a semi variable cost. At 100% capacity level, manufacturing overheads are R1 400 000.

6) Selling expenses are incurred for “Hotel” only.

7) The following changes are expected for the 2021 financial year:

• The machine production time for “Hotel” will decrease by 5 machine hours per unit.

• The labour time for “Hotel” will increase to 4 hours per unit.

• Selling expenses for “Standard” are now expected to be incurred as well.

• All other costs and selling prices will remain unchanged.

Required:	
Determine the sales mix (in units) that should be budgeted for the 2021 financial year to maximize the budgeted contribution for Mendi Products (Pty) Ltd. Evaluate and clearly indicate which resource is a limiting factor.	(40)
Prepare the following sub budgets for Mendi Products (Pty) Ltd for the 2021 financial year: • Sales Budget • Manufacturing overheads Budget	(10)

Healthy Limited (LU 12)

Healthy Limited is a South African healthcare company based in South Africa and Namibia. The company has 13 hospitals across both countries and is considered to have a significant market share. The directors of Healthy Limited are concerned about the results received from one of their hospitals in Namibia. The Opuwo Hospital in the rural Kunene region is only the second hospital opened by Healthy Limited in Namibia. The first hospital, Windhoek General was opened ten years ago and has seen increased profits in the last five years.

Opuwo Hospital has a maximum capacity of 85 beds and is opened 365 days a year. The income received per bed per day is R500. The following costs were incurred by Opuwo Hospital in the previous financial year:

- Cleaning costs of R12 800 per month.
- Patient meals are outsourced to Mandy's Meals. These cost R95 per meal. Meals are provided three times a day.
- Salaries of hospital staff. Hospital staff are paid R80 800 per month.
- The average cost of medical supplies is R155 per patient per day.
- Semi variable overheads at full capacity is R1 892 800 an annum, while at 80% capacity the semi variable overheads amount to R1 694 240 an annum.

The following changes are expected in the next financial year:

- Although hospital staff have been unhappy with their salaries and work conditions, Opuwo Hospital's management believe the only way to start seeing more profits like Windhoek General is to decrease their staff cost. Staff salaries will decrease in total by 8.5%
- Income received per bed per day will increase by 12%
- Green Clean, a new service provider that entered in to the market, three months ago, will replace the existing cleaning service provider. This change will result in a 20% saving per month in terms of cleaning costs.

Required:	
Prepare a report to Opuwo Hospital's management in which you advise them on the capacity they need to operate at to break even for the next financial year.	(15)

Produx (Pty) Ltd (LU 12)

Produx (Pty) Ltd is in the manufacturing industry. They sell one product and the selling price for 2018 is budgeted to be R220 per unit. Selling and distribution costs is equal to 5% of the selling price per unit.

The following information is available for the 2017 financial year:
Produx (Pty) Ltd has 12 employees currently employed to run the production line. If their production line operates for 130 hours per month the production labour cost is R 85 200. If their production line operates for 150 hours per month the production labour cost increases to R 90 000. 8 units are manufactured per hour. Direct material cost is R 60 per unit and variable manufacturing overhead is R15 per unit. Other fixed costs amount to R 60 000 per month.

For the 2018 financial year Produx (Pty) Ltd budget to manufacture and sell 1 800 units per month. The cost structure is expected to remain the same as in 2017. The company is not planning to appoint any additional employees at this stage.

The company make use of the high low method.

Required:	
Calculate the budgeted breakeven point in units for the 2018 financial year.	(13)
Explain the difference between fixed and variable costs.	(2)

Solow (Pty) Ltd (LU 12)

Solow (Pty) Ltd is a manufacturer of solar panels based in Pinetown. The company has a focused research and development team that has been working on improving the production of their solar panels. They have recently patented a new design of solar panels that will be called SolarX. SolarX will be sold at R3 000 per unit.

At the last project meeting, the research and development team presented Mr Jacobs, the financing director with two different methods that may be used to produce SolarX. Mr Jacobs would like to choose the method that allows Solow (Pty) Ltd to reach the breakeven point the fastest. Information on the two different methods compiled by the research and development team have been presented below:

	Method A	**Method B**
Raw material per unit	R1 450	R1 950
Labour per unit	R865	R725

Annual semi-variable production costs to produce the solar panels using each method, has been estimated as follows:

	Method A	**Method B**
13 000 units produced	R1 612 500	R1 645 000
14 000 units produced	R1 675 000	R1 760 000
15 000 units produced	R1 737 500	R1 825 000

Other fixed manufacturing costs using Method A, will be R300 500 per month and R390 000 per month using Method B.

Required:	
Prepare a report to Mr Jacobs recommending which method he should choose based on his requirements. Calculations are required. [Round all answers to two decimal places.]	(17)
Discuss the other considerations that Mr Jacobs should consider before making his decision.	(3)

Cuppie Cakes (Pty) Ltd (LU 12)

You are a trainee in a consulting firm called Mazibuko consultants. Your manager, Phindi has asked you to assist on a new client, Mr Reddy. Mr Reddy is currently considering purchasing a mobile cupcake food truck business called Cuppie Cakes (Pty) Ltd ("Cuppie Cakes"). Cuppie Cakes has been trading at Florida Road in Durban, Kwa Zulu Natal for three years and has built a reputation for fresh, tasty gluten free cupcakes. The purchase price of the business is R1 200 000. The owner of Cuppie Cakes, Mrs Cooper, has provided you with the following budgeted costs for the next financial year:

Direct material	R360 000
Direct labour – variable	R180 000
Manufacturing overheads	R280 000
Selling and administration costs	R50 000

Additional information:

• Each cupcake sells for R10. Given the decrease in sales because of the COVID 19 pandemic, the selling price is unlikely to increase in the coming year.

• The budget is based on normal capacity. At normal capacity, production and sales volumes of 120 000 cupcakes are expected.

The selling and administration costs for the year are fixed.

• The manufacturing overheads are R240 000 when 80 000 cupcakes are produced and R320 000 if 160 000 cupcakes are produced.

Required:	
List the assumptions underlying CVP analysis.	(5)
Prepare a report to Mr Reddy, including the following information on Cuppie Cakes (Pty) Ltd: **Breakeven (Discussion: 2 marks, Calculations: 9 marks)** - an explanation of the term breakeven, why this may be a beneficial calculation for MR Reddy to consider and a calculation of the budgeted breakeven in units for Cuppie Cakes (Pty) Ltd's upcoming financial year. **Margin of safety (Discussion: 2 marks, Calculations: 2 marks)** - A calculation of the budgeted margin of safety ratio, based on normal capacity. Include an explanation on the margin of safety ratio and comment on your calculation for Cuppie Cakes (Pty) Ltd. **Target Profit Calculations (Discussion: 2 marks, Calculations: 6 marks)** Scenario 1) A calculation of the minimum acceptable sales level in units that Mr Reddy will have to sell, assuming that he requires a profit of at least 7% of the purchase price. Scenario 2) A calculation of the percentage that sales price would have to increase by in order to record an increase in profit by 12%.	(25)

Discuss any qualitative factors Mr Reddy should consider before purchasing Cuppie Cakes (Pty) Ltd	(4)
Assume Mr Reddy has now purchased Cuppie Cakes (Pty) Ltd and is considering the following two proposals:	(6)
Proposal 1: Mr Reddy believes that increasing trading hours will increase sales volumes. This will have no effect on variable costs, fixed costs however will increase by R28 000 per annum. Proposal 2: Mr Reddy is keen to purchase new baking equipment to improve profitability. The new machine will decrease variable costs by 30%. Additional fixed costs of R34 500 per annum will be incurred. Evaluate the proposals and determine which proposal will improve the breakeven in units.	

Staples (Pty) Ltd (LU 12)

(Marks: 35)

You have recently been employed as a junior accountant at Staples (Pty) Ltd (Staples). Staples is a company that manufactures electrical components to the technology industry. Staples is an SMME (Small, Medium and Micro Enterprise). Like others in the technology industry, Staples was significantly impacted by the COVID-19 pandemic in the last few years.

The management accountant has asked you to analyse financial information for the year ended 31 May 2022 and to assist in preparing information required for the 2023 budget.

You have received the following extracts from the statement of comprehensive income for the year ended 31 May 2022.

Extracts of **actual** statement of comprehensive income for the year ended 31 May 2022	
Sales	R2 000 000
Less: Cost of Sales	(R1 760 000)
Opening inventory	-
Raw materials	R500 000
Direct labour	R600 000
Manufacturing Overheads	R660 000
Closing inventory	-
Gross Profit	R240 000
Less: Non-manufacturing costs	(R260 000)
Fixed Administration costs	R80 000
Selling costs	R180 000
Net Profit	(R20 000)

Additional information for the financial year ended 31 May 2022:

- Sales units was budgeted at 22 000 units for the financial year. The budgeted selling price for the financial year was R100 per unit.
- There are no raw material inventories at either the beginning or end of the year.
- Actual units produced in 2022 was 20 000 units, budgeted production was 22 000 units.
- Unit costs, selling price and fixed costs were as budgeted.
- Selling costs are semi-variable in nature. At a sales volume of 22 000 units, selling costs would have amounted to R190 000.
- Total actual fixed manufacturing overheads amounted to R660 000.
- The company's relevant range is between 20 000 and 25 000 units.

Budget information 2023 financial year

You have received the following information for the 2023 financial year:

- Unit sales prices are expected to increase by 8%.
- Sales units are expected to be 22 000 units. Production of 21 000 units is expected.
- Raw material costs are expected to increase by 2%. All other variable costs are expected to increase by 10%.
- All fixed costs are expected to increase by 5%.
- In the recent management meeting, the directors indicated that the objective for the 2023 financial year would be to achieve a profit of 6% of turnover.

(Adapted from ITC)

Required:

	Calculate what the **budgeted** breakeven in units for the 2022 financial year would have been.
	Calculate the **budgeted** breakeven in units and margin of safety percentage for the 2023 financial year. Explain briefly what Staples' margin of safety indicates.
	Determine how many units would need to be sold in order to achieve the director's objective. Recommend steps that Staples could take to achieve its target profit.
	Discuss the assumptions of CVP analysis and some of the potential challenges when performing a CVP analysis during the COVID-19 pandemic. **Calculations are not required.**